

CLAIMS:

1. An RF system for a magnetic resonance imaging device (13), comprising an RF transmitter coil subsystem and an RF receiver coil subsystem (18), characterized in that the RF receiver coil subsystem (18) comprises at least one first coil-like element (19) and at least one second coil-like element (20), wherein the or each first coil-like element (19) is
5 assigned to a main magnet system (15) of the magnetic resonance imaging device (13), and wherein the or each second coil-like element (20) is assigned to an object (14) to be analyzed by the magnetic resonance imaging device (13).
2. An RF system according to claim 1, characterized in that the or each first coil-
10 like element (19) is positioned below, preferably directly below, a support or bed (17) on which the object (14) to be analyzed is placed.
3. An RF system according to claim 2, characterized in that the or each first coil-
15 like element (19) is designed as part of a built-in system body coil.
4. An RF system according to claim 2, characterized in that the or each first coil-
like element (19) is attached to the main magnet system (15) of the magnetic resonance
imaging device, in a way that a relative movement between said support or bed (17) and the
or each first coil-like element (19) is possible.
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5. An RF system according to claim 4, characterized in that the or each first coil-
like element (19) is fixedly attached to said main magnet system (15), in a way that the
support or bed (17) is movable relative to the or each fixed first coil-like element (19).
- 25 6. An RF system according to claim 4, characterized in that the or each first coil-
like element (19) is movably attached to the main magnet system (15), in a way that the
support or bed (17) is movable relative to the or each first coil-like element (19) and that the
or each first coil-like element (19) is movable relative to the main magnet system (15).

7. An RF system according to claim 1, characterized in that the or each second coil-like element (20) is positioned above, preferably directly above, the object (14) to be analyzed by the magnetic resonance imaging device.

5 8. An RF system according to claim 7, characterized in that the or each second coil-like element (20) is attached to the object (14) to be analyzed, in a way that the or each second coil-like element (20) is movable together with the object (14) to be analyzed.

9. An RF system according to claim 8, characterized in that the or each second
10 coil-like element (20) is movable together with a support or bed (17) on which the object (14) to be analyzed is placed relative to the or each first coil-like element (19).

10. An RF system according to claim 7, characterized in that the or each second coil-like element (20) is designed as a wearable unit, wherein said wearable unit is attachable
15 to the object (14) to be analyzed, outside the magnetic resonance imaging device and before MRI analysis.

11. A magnetic resonance imaging device (13), comprising a main magnet system (15), a gradient coil system, an RF system and a signal processing system, said RF system
20 comprising an RF transmitter coil subsystem and an RF receiver coil subsystem (18), characterized in that the RF receiver coil subsystem (18) comprises at least one first coil-like element (19) and at least one second coil-like element (20), wherein the or each first coil-like element (19) is assigned to the main magnet system (15), and wherein the or each second coil-like element (20) is assigned to an object (14) to be analyzed by the magnetic resonance
25 imaging device (13).

12. A magnetic resonance imaging device (13) according to claim 11, characterized in that the RF system is an RF system according to any one of the preceding claims 2 to 10.